Iowa Department of Natural Resources
Wastewater Section
Construction Permit Application
SCHEDULE O, Aeration Tanks or Basins

DATE PREPARED	PROJECT IDENTITY	DNR USE
		PROJECT NO.
DATE REVISED		
		PERMIT NO.

1. Classification of Process _____

2. Design Loadings: (waste entering tank unit operation)

	ADW	AWW	MWW	PHWW
Flow, MGD				
BOD5, mg/l				
TSS, mg/l				
NH3-N, mg/l				

Design Temp. _____ ° F

3. Aeration tank unit operation follows _____ and precedes _____

4. Design data: First stage _____ Second stage _____

Parameter	Unit No. 1	Unit No. 2	Unit No. 3
Specify whether new or existing			
Dimensions (Length x Width)			
SWD (ft)			
Freeboard (in)			
Effective Volume (gal)			
Detention Time at AWW flow (hrs)			
Loading (#BOD5/day/1,000 ft^3)			
Air Provided (ft^3/#BOD_5)			
Oxygen Provided (#O_2/#BOD_5)			
F/M Ratio			
MLSS/MLVSS (mg/l)			
SRT (days)			
Sludge Return: Percent			
Sludge Return: GPM			
Gallons of Waste Sludge @ % solids			
Sludge Wasting: Method			
Sludge Wasting: Location			

5. Is service bypass provided? _____ Discharge to _____

6. Is cold weather protection provided? _____ How _____

7. Aeration Equipment: Design Air Temperature _____ ° F to _____ ° F

   A. Rotors:
   No. of Rotors _____ Dimensions _____
   Each _____ HP Maximum submergence _____ inches
   Cross Section velocity _____ fps
   Specify provisions for cross-sectional velocity control _____

   B. Diffusers:
   No. of Blowers _____ Each _____ CFM at _____ psi
   Type of Diffuser _____ No./Tank _____
   Total CFM of air required _____ Provided _____

   C. Mechanical:
   No. and type of unit _____
   Each _____ HP Rated Capacity _____ #O_2/hour

8. Sludge Return Pump
   No. of Pumps _____ Type _____ Each _____ GPM
   Rated TDH _____ Required TDH _____
   Range _____ GPM to _____ GPM Type of control _____